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ABSTRACT

This report contains the highlights of a study undertaken at the behest of the Iowa General Assembly and the State Board of Regents to propose the characteristics and site of a new State institution of higher education in Western Iowa. This report contains: (1) "The Proposal" of a four year institution to be located in the community of Atlantic; (2) "The Background" which discusses the general economic, population and educational factors behind the proposal; (3) "The Profile" which describes in broad terms the institution envisaged; (4) "The Location" which explains how the general location and specific site were selected, and some of the alternatives considered; and (5) "The Costs" which indicates the general methods whereby operating and capital costs were calculated. (AF)

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Prospectus for a new state institution of higher education in western iowa

HE001610

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Management Consultants
for the
Iowa State Board of Regents

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Foreword

Cresap, McCormick and Paget, a firm of general management consultants, is reporting herewith the highlights of a study undertaken at the behest of the Iowa General Assembly and the State Board of Regents, to propose the characteristics and site of a new State institution of higher education to be established in Western Iowa.

The objective of the study was to recommend the kind of institution needed to supplement the other educational resources of the State, enrollment potential, location, and operating costs. Cresap, McCormick and Paget enlisted the further assistance of Heald, Hobson and Associates, who advised on the institution's program, and Dr. John J. Hartmann of Iowa State University, who modified his computer program to assist in projecting population and potential college enrollments.

The Perkins and Will Partnership was retained by the State Board of Regents to assist in the selection of a specific site – working with the general consultants – and to develop the probable capital costs.

A three-volume report on study findings was issued jointly by Cresap, McCormick and Paget and The Perkins and Will Partnership, and may be secured from the Board of Regents on request. Working papers are also on permanent file at the Board's offices in Des Moines.

Cresap, McCormick and Paget wishes to extend especial thanks to the Professional Advisory Committee appointed by the State Board of Regents, with which the consultants worked and which assisted generously with data and counsel. The Regents' charge to the Committee and a list of its members appear on pages 32 and 33 of this pamphlet.

The consultants also appreciate the efforts of the many other agencies and individuals who contributed to the success of this study. In particular, they commend the fine spirit displayed by the communities approached as possible locations for the new institution. Without such an attitude of welcome and support, the venture would lose much of its potential as an educational and cultural resource for the people of Iowa.

CRESAP, McCORMICK and PAGET
Management Consultants

The Proposal

- **In House File 747, the Sixty-Second General Assembly authorized planning studies for a State institution of higher education, to be located in Western Iowa.**

  This institution would be under the jurisdiction of the State Board of Regents, which was directed to "engage consultants acknowledged to be experienced in the field of planning for institutions of higher education, and therewith to proceed to initiate plans for the location, establishment, construction and operation of a State institution of higher education in Western Iowa."

  The Board was further directed, "upon its selection of the location," to "purchase, acquire, lease, option, or accept as a gift any real property necessary for the establishment and growth of this institution."

  Since "Western Iowa" was not defined by the legislation, the area so identified by the Iowa Development Commission (see facing map) was adopted as Western Iowa for purposes of the study.

- **The result, in brief, is a proposed public four-year undergraduate college of liberal arts and sciences, to be located preferably in the community of Atlantic.**

  The college would operate under the same standards of admission as the other Regents' institutions, but would not duplicate their graduate and research programs.

  Atlantic, in Cass County, is regarded as a desirable site because it is in that part of the State most lacking in facilities for higher education (a so-called "college-void" area), it can support the proposed college with adequate civic services, and the campus would be attractively situated.

  The southwestern region of the State is also the region now sending the most young people outside Iowa to seek college training; some of these trained young people may then be lost as permanent Iowa residents.

  The new institution would be planned for a total enrollment of 8,550 in 20 years, but with the substantial part of this enrollment (8,400 students) achieved in ten years.

  While 1973 is the earliest practicable date the new institution could open, whether the institution should open at all is a question of the State's need for a new college or university; the scope of the study did not include this consideration.

LOCATION OF THE PROPOSED INSTITUTION IN WESTERN IOWA

COUNTIES REGARDED AS WESTERN IOWA

Adair
Adams
Audubon
Buena Vista
Calhoun
Carroll
Cass
Cherokee
Clay
Crawford
Dickinson
Emmet
Fremont
Greene
Guthrie
Harrison
Humboldt
Ida
Kossuth
Lyon
Mills
Monona
Montgomery
O'Brien
Osceola
Page
Palo Alto
Plymouth
Pocahontas
Pottawattamie
Ringgold
Sac
Shelby
Sioux
Taylor
Union
Woodbury
Webster

- **If the new institution opens its doors in 1973, its annual operating costs by the end of the fifth year would be approximately $15.3 million.**

  In its tenth year, because of the growth in enrollment and the inflation factor, operating costs would be approximately $30 million; in 20 years, they would be nearly $50 million.

- **Capital costs would total some $192 million, of which $71 million would be funded by the General Assembly.**

  The remainder, chiefly for housing and for a student union, could be financed through bond issues.

  Construction would be phased to fit the growth in enrollment, and would be completed at the end of ten years.

- **More detail on this proposal appears in the following pages, under the headings "The Background," "The Profile," "The Location," and "The Costs."**

  "The Background" discusses the general economic, population and educational factors behind the proposal.

  "The Profile" describes in broad terms the kind of institution envisaged.

  "The Location" explains how the general location and specific site were selected, and some of the alternatives considered.

  "The Costs" indicates the general methods whereby operating and capital costs were calculated.

The Background

- **The primary consideration which prompted the General Assembly to contemplate a new institution of higher education for Western Iowa is the comparative dearth of college facilities in that area.**

There are no Regents' institutions in the 38 counties which make up Western Iowa.

The 19 counties in the northwestern area have a total of six private colleges, one private junior college, and three area schools; in the 19 counties making up Southwestern Iowa, there is one private college and three area schools.

These figures contrast sharply with the three Regents' institutions, 20 private colleges, five private junior colleges and 11 area schools in Eastern Iowa.

Many potential students in Western Iowa live beyond commuting distance of both public and private schools, and thus cannot go to college for financial reasons.

The lack of colleges and universities in Western Iowa, and especially in Southwestern Iowa, may have contributed to the economic and population decline in that part of the State by draining off young people elsewhere and giving inadequate opportunities to those who remain.

There are relatively fewer cultural centers and resources in the western part of the State than in the eastern part, and a new institution could help to redress that balance as well.

Regional Economic Differences

- **While Iowa's total economic growth rate has been somewhat less than the national average since 1950, the growth rate of Western Iowa has been appreciably lower than that of the eastern part of the State.**

Iowa as a whole is shifting from a mainly agriculture-based economy to a more balanced mix of agriculture and manufacturing; Western Iowa has been slower than Eastern Iowa in making this shift.

In 1960, an average of nearly 19 per cent of Iowa's labor force was employed in manufacturing; in the 61 counties making up Eastern Iowa, 17 exceeded this average, but only 2 of the 38 Western Iowa counties exceeded it.

Likewise, 12 of the Eastern counties had more than the average number of white-collar workers, but only three of the Western counties exceeded the average.

In 1960, Western Iowa had substantially fewer families making high incomes, and substantially more making lower incomes, than did the eastern part of the State.

In terms of effective buying income (roughly the same as per capita income), Sales Management magazine estimates the growth in the eastern and western sectors as follows.

Growth in Effective Buying Income

	1961 Per Capita	1967 Per Capita	Per Cent Increase, 1961-67
Iowa Total	$1,806	$2,779	54.0%
Eastern Iowa	1,883	2,825	50.0
Western Iowa	1,613	2,557	58.5

Source: **Survey of Buying Power,** June 1962 and 1968, Sales Management

This table shows that while Western Iowa income has grown at a somewhat faster pace during the 1961-67 period than that of Eastern Iowa, there is still an appreciable lag.

Regional Educational Differences

- **Over 70 per cent of Iowa's 1960 population was in the 61 counties of Eastern Iowa, but almost 91 per cent of the State's 1967 enrollments in higher education were in this region.**

  This included 44,000 in the three Regents' institutions, 30,000 in private colleges, 3,000 in private junior colleges, and 9,000 in the area schools.

  Eastern Iowa also had 80.8 per cent of the State's enrollments in vocational-technical programs, and 82.5 per cent of the enrollments in adult education.

- **The 19 counties which make up Northwestern Iowa had over 16 per cent of the State's 1960 population but had only about 7 per cent of the 1967 enrollments in higher education.**

  The six private colleges enrolled 6,000 and the one junior college and the area schools enrolled 2,075.

  Northwestern Iowa had 12.1 per cent of the State's vocational-technical enrollments, and 9.2 per cent of the adult educational enrollments.

- **The 19 counties in Southwestern Iowa accounted for 12 per cent of the State's 1960 population, but fewer than 2 per cent of the students enrolled in higher education.**

  The one private college enrolled 790 students, and the three area schools enrolled 1,000.

Vocational-technical programs had 7.1 per cent of the State's enrollments, and 8.3 per cent of the adult educational enrollments were in this region.

Expected Future Enrollments

- **On the basis of the most careful analysis that can be made at this time regarding the number of young Iowans who will want to go to college by 1988, there would appear to be a gap of several thousand between the potential college-goers and the places for them that will be available in Iowa's institutions.**

The following table shows the project made by the consultant's on the basis of Dr. Hartmann's work.

PROJECTION OF STUDENTS GOING TO COLLEGE

Year	18-21-Year-Old Males	18-21-Year-Old Females	22-25-Year-Old Males	22-25-Year-Old Females	Total
1968	53,220	37,700	8,690	2,760	102,370
1969	56,750	41,140	9,650	3,200	110,740
1970	60,990	42,920	9,980	3,460	117,350
1971	62,660	45,640	10,710	3,490	122,500
1972	65,110	47,380	10,960	4,010	127,460
1973	66,660	48,920	11,860	4,410	131,850
1974	69,220	50,120	12,240	4,920	136,500
1975	70,440	52,120	12,990	5,250	140,800
1976	72,210	53,720	13,550	5,520	145,000
1977	73,430	55,140	14,210	6,020	148,800
1978	74,200	56,020	15,110	6,170	151,500
1983	79,160	58,880	17,550	7,560	163,150
1988	82,020	58,990	20,690	9,120	170,820

Source: Population (from J. J. Hartman projection) times forecast college-going ratio, rounded to nearest 10.

As this table indicates, for the State as a whole, the college-going potential is expected to increase from 102,370 in 1968 to over 170,000 in 1988, an increase of about two-thirds.

The table on page 11 shows a forecast of school enrollment in existing institutions of higher education in the State.

Of the college-bound young people, the present Regents' institutions thus expect to take care of about 74,000 in 1988; area schools, 26,500; and private schools, 63,000; the combined total is forecast statistically as 163,620.

On a purely statistical basis, the gap would be between 6,000 and 7,000 students.

The Migration Factor

- **Migration of Iowa students to colleges and universities outside the State has historically been an important element in Iowa's higher education picture.**

  A study of student migration made by the U. S. Office of Education in 1963 showed that over 15,000 Iowa students left Iowa to go to college and graduate school in other states – 26 per cent, as compared with a 19 per cent average for the United States as a whole.

  Over 60 per cent of the migrating Iowa students attended institutions in the bordering state of Missouri, Nebraska, Illinois, Minnesota, and South Dakota, in that order.

- **Further study of migration patterns by the consultants showed that Iowa out-migrants tended to choose schools not too far from their home residences.**

  Thus students who go to Missouri tend to be from the southern part of the State; those who go to Nebraska live in the western sector; those attending Minnesota institutions live in the north; and so on.

- **There is also a greater tendency toward out-migration in Western Iowa, particularly Southwestern Iowa, than in the rest of the State.**

  The number of student out-migrants per thousand population in Eastern Iowa is 1.61; in Northwestern Iowa, 3.63; in Southwestern Iowa, 6.33.

  More students left Western Iowa to attend institutions in other states than left Eastern Iowa, although Western Iowa's population is only slightly over one-quarter of the whole.

  A larger number of students left the southwest region than left the northwest region, although the population is smaller.

FORECAST OF SCHOOL ENROLLMENT
(Existing Institutions)

Year	Public Junior Colleges	Increase Over Previous Year	State Institutions	Increase Over Previous Year	Private Colleges And Universities	Increase Over Previous Year	Total
1968	13,500		46,000		42,500		102,000
1969	14,700	9.0%	48,300	5.0%	44,740	4.6%	107,740
1970	15,700	7.0	50,500	4.5	46,200	4.0	112,400
1971	16,700	6.5	52,500	4.0	47,800	3.5	117,000
1972	17,700	6.0	54,400	3.5	49,460	3.0	121,560
1973	18,700	5.5	56,300	3.5	50,700	3.0	125,700
1974	19,600	5.0	58,300	3.5	52,200	2.8	130,100
1975	20,500	4.5	60,200	3.2	53,500	2.5	134,200
1976	21,300	4.0	62,100	3.2	54,800	2.5	138,200
1977	22,000	3.5	64,000	3.0	55,900	2.0	141,900
1978	22,500	2.5	65,300	2.0	56,700	1.5	144,500
1983	24,800	10.0	70,500	8.0	60,700	7.0	156,000
1988	26,500	7.0	74,000	5.0	63,120	4.5	163,620
1968	13.2%		45.1%		41.7%		100.0%
1988	16.1%		45.2%		38.7%		100.0%

NOTE: These forecasts do not reflect changes in forecast migration patterns.

Source:
- Forecasts all schools, Proposal for Progress.
- Statewide population estimates.
- Enrollment projections by registrars of State institutions.
- Projections of 1960-67 enrollment trends via "President's Reports."
- State Board of Regents' policy per Regents' Board Minutes, March 1967, p. 427.
- CMP analysis of foregoing data together with trends caused by opening a new Western Iowa institution.

- **While out-migration can be expected to continue to take care of some of the educational needs of Western Iowa, there are three negative factors to be considered.**

  Not all students are financially able to avail themselves of this resource.

  It is possible that out-migration hastens the drain of trained young people from this region.

  Finally, there are indications that some of the neighboring states – notably Missouri – wish to limit the number of students their public institutions will accept from other states, both for financial reasons (the extent to which the state subsidizes students in these institutions) and to ensure enough places for their own young people.

- **In conclusion, present student out-migration in Southwestern Iowa indicates this region as the primary candidate for a new institution, and potential enrollments could be bolstered by the retention of students who are now going elsewhere, out of the State.**

  The following table indicates the general magnitude of the opportunity.

MIGRATION OF IOWA HIGH SCHOOL GRADUATES

Region	Total Graduates Surveyed	Per Cent Attending College	Per Cent Attending In State	Per Cent Attending Out of State
Total State	40,927	45.4%	77.5%	22.5%
Eastern Iowa	29,087	45.7	81.5	18.5
Western Iowa	11,840	44.6	67.4	32.6
Northwestern Iowa	6,431	47.9	72.9	27.1
Southwestern Iowa	5,409	40.6	59.7	40.3

Source: Graduate Follow-Up, 1965 High School Graduates, **Data on Schools,** 1966 Edition, Department of Public Instruction.

The Profile

Mission and Objectives

- **The new State-supported institution of higher education to be located in Western Iowa should be a quality four-year undergraduate school with the following general objectives.**

  It should offer educational opportunities to students from the entire State – not merely Western Iowa – including some opportunities which might not be available in existing public institutions.

  It should be designed to attract many of the students in Western Iowa who are now migrating to other states.

  It should be a cultural center for the western part of the State, with library and other resources which could be drawn upon by all levels of educational institutions in that region.

  It should offer special inservice programs for teachers, and Master's level work in education.

  It should avoid duplication and competition with other higher educational institutions to the greatest possible extent, cooperating and coordinating its programs with public and private colleges and area schools.

  It should work out sound transfer programs with the area schools and private junior colleges.

  It should stimulate more high school graduates in Western Iowa to seek a college education, and be a center of continuing education by working with existing institutions to develop credit and noncredit programs for adults.

- **The new institution should differ in emphasis from the existing Regents' institutions.**

  While the new institution would be under the jurisdiction of the Board of Regents, it would have a somewhat different mission from that of the three existing Regents' institutions (State University of Iowa, Iowa State University, and University of Northern Iowa).

  These institutions can be characterized as graduate level and research oriented, with nationally recognized professional programs as well as programs of advanced studies and research.

  The new institution should offer special and flexible programs for undergraduates, which are different from the undergraduate programs in the present institutions and which meet, on a State-wide basis, student needs which are not now being met. Such a difference in emphasis would ensure against duplication of costly research facilities and graduate programs.

Academic Characteristics

- **While the new institution should be free to develop its own character and image, it should offer a broadly based and comprehensive four-year liberal arts curriculum, covering the arts, the humanities, the social sciences, and the natural sciences.**

  One avenue of experimentation might be to offer flexible programs of study, so that each student could move through the degree requirements at his own pace, with extensive counseling available to help him make the most of his opportunities.

  A second avenue of experimentation might be to cluster students in groups of 800 to 1,000 in special areas of academic emphasis, with a nucleus of faculty advisers and program leaders.

  Each of these groups might be housed in its own residential area; however, such major resources as libraries and laboratories would be used in common.

  Such professional programs as engineering, agriculture, medicine, dentistry, law, and business (at the Master's level) should be excluded, although undergraduates should be able to complete the State requirements for teaching.

  The school should not offer degrees beyond the A.B. or B.S. except at the Master's level for inservice teachers, or in cooperation with the existing Regents' institutions.

  There should be enough specialization in business and management to prepare the graduates of the new institution for work in business and industry in the region.

  Two-year terminal programs should be excluded since these are now adequately covered in the area schools; and students with primarily vocational aptitudes and desires should be encouraged to transfer to an area school.

  Particular emphasis should be placed on continuing education for adults in Western Iowa, with noncredit cultural, professional and technical programs, many of them developed in conjunction with other institutions and supplemented by self-study.

  The school might also undertake to pay particular attention to the performing and creative arts, seeking to bring these arts to Western Iowa communities rather than setting up an elaborate and expensive art center at the institution itself.

The Faculty

- **The faculty of the new institution should be primarily oriented to teaching.**

  The educational consultants suggest that while a highly competent faculty should be sought, the major interest of its members should be in teaching and experimenting with new educational methods rather than in their own scholarly production and continuing research.

The faculty should endeavor to develop an undergraduate educational experience that will be relevant and challenging to all students, the superior as well as the average.

Such an orientation should allow the new school to attract the kind of faculty it desires without competing for them with the other Regents' institutions in particular.

The Students

- **As in the present Regents' institutions, the students in the new college would be drawn from the top half of their high school classes.**

The Regents desire to maintain this policy to ensure the high quality of all institutions they are responsible for.

However, many of the students might differ somewhat from the students who attend the present State universities, depending on the extent to which the new institution can offer innovative undergraduate programss.

The top enrollment figure envisioned is 8,550 students, after 20 years.

Proposed Physical Characteristics

- **The institution would have the advantage of being entirely new, so that it could be planned at the outset for consistent and harmonious development on an ample and attractive campus site.**

The buildings would be constructed in increments as enrollment grows.

While it is not possible to prescribe the exact architectural style at this time, all three sites considered would lend themselves to a comparatively low, horizontal building style, fitting into a gently rolling terrain.

A small lake may at some time be made a feature of the campus, for both aesthetic and recreational reasons.

The Location

- **Specifying only that the new State institution for higher education be in Western Iowa, the General Assembly authorized the Board of Regents to hire consultants to assist in the selection of a specific site.**

The consultants approached this task in two parts.

Part one was the selection of the general location for the new institution; part two was the selection of a specific community and a specific site.

General Location and Site Criteria

- **As a first step, the consultants agreed with the Board of Regents on the guidelines to be followed in the selection process.**

Basis considerations in the selection process were:

- The fundamental role of the institution
- Location in relation to desirable resources
- Possible sources of students
- Factors affecting faculty recruitment
- Relationship with nearby communities
- Relationship with similar institutions.

These considerations influenced the choice not only of a general location, but of a specific site within that location.

General location criteria further took into consideration:

- The geographic center of concentration of students to be served
- The kinds of established communities that could support the proposed institution
- Ease of access.

Site criteria, for selecting the specific tract of land for the campus, included:

- Environment and appeal
- Present and potential land use
- Topography
- Community development
- Availability
- Costs

- Community support
- Educational base
- Part-time employment opportunities
- Student population
- Development characteristics.

These criteria were approved by the State Board of Regents in May 1968.

Selection of General Location

- **On the assumption that the new institution will be a four-year undergraduate school serving State-wide needs and offering distinctive programs in the liberal arts, existing colleges in Western Iowa playing a similar role were identified to discover whether a "college void" exists.**

  Seven four-year colleges in the western part of the State were considered as offering the same broad educational opportunities: Briar Cliff, Buena Vista, Dordt, Midwestern, Morningside, Northwestern, and Westmar.

  All of these institutions are in the northern part of Western Iowa, except for Midwestern.

  In this sense, Southwestern Iowa can be described as a "college-void" area; further, only three area schools are located there.

- **Geographic centers of student concentrations were determined.**

  On the basis of the undergraduate student 20-year projections developed for this study, the following points were established.

  The geographic center of student concentrations in Iowa as a whole, 20 years hence, is expected to be in Marshall County, in Eastern Iowa.

  In Eastern Iowa versus Western Iowa (61 counties and 38 counties respectively), the two centers will be in Benton County in the east and Crawford County in the west.

  In Northwestern versus Southwestern Iowa (19 counties each), the centers will be in Buena Vista and Pottawattamie Counties respectively.

- **Student migration patterns point to Southwestern Iowa as losing the greatest number of high school graduates to colleges in other states.**

  This point has already been noted in the Background section.

  Southwest Iowa loses especially large numbers of students to Nebraska and to Missouri.

- **Nineteen communities in Western Iowa, both north and south, were identified as having enough basic support capabilities to be practicable sites for a new institution.**

  The table below lists these communities, their county, their population, and the students who might be expected to be available.

POPULATION CENTERS IN WESTERN IOWA

Community	County	Population	Students Within 50-Mile Radius (a)
Algona	Kossuth	5,977	5,670
Atlantic	Cass	6,890	10,483
Carroll	Carroll	8,481	11,866
Cherokee	Cherokee	7,724	13,190
Clarinda	Page	5,901	7,209
Council Bluffs	Pottawattamie	55,641	7,285
Creston	Union	8,119	4,706
Denison	Crawford	6,780	14,890
Estherville	Emmet	8,092	4,145
Fort Dodge	Webster	31,707	5,981
Glenwood	Mills	4,783	7,590
Harlan	Shelby	4,775	9,783
Jefferson	Greene	4,570	6,200
LeMars	Plymouth	7,847	8,900
Shenandoah	Page	6,567	6,899
Sioux City	Woodbury	89,159	8,768
Spencer	Clay	8,864	8,288
Storm Lake	Buena Vista	7,728	13,862
Red Oak	Montgomery	6,421	8,247

(a) Based on student projections for the year 1973; excludes students within 40 miles of an existing Regents' University.

- **An analysis of transportation facilities shows that the planned interstate highway system favors the southwestern part of the State.**

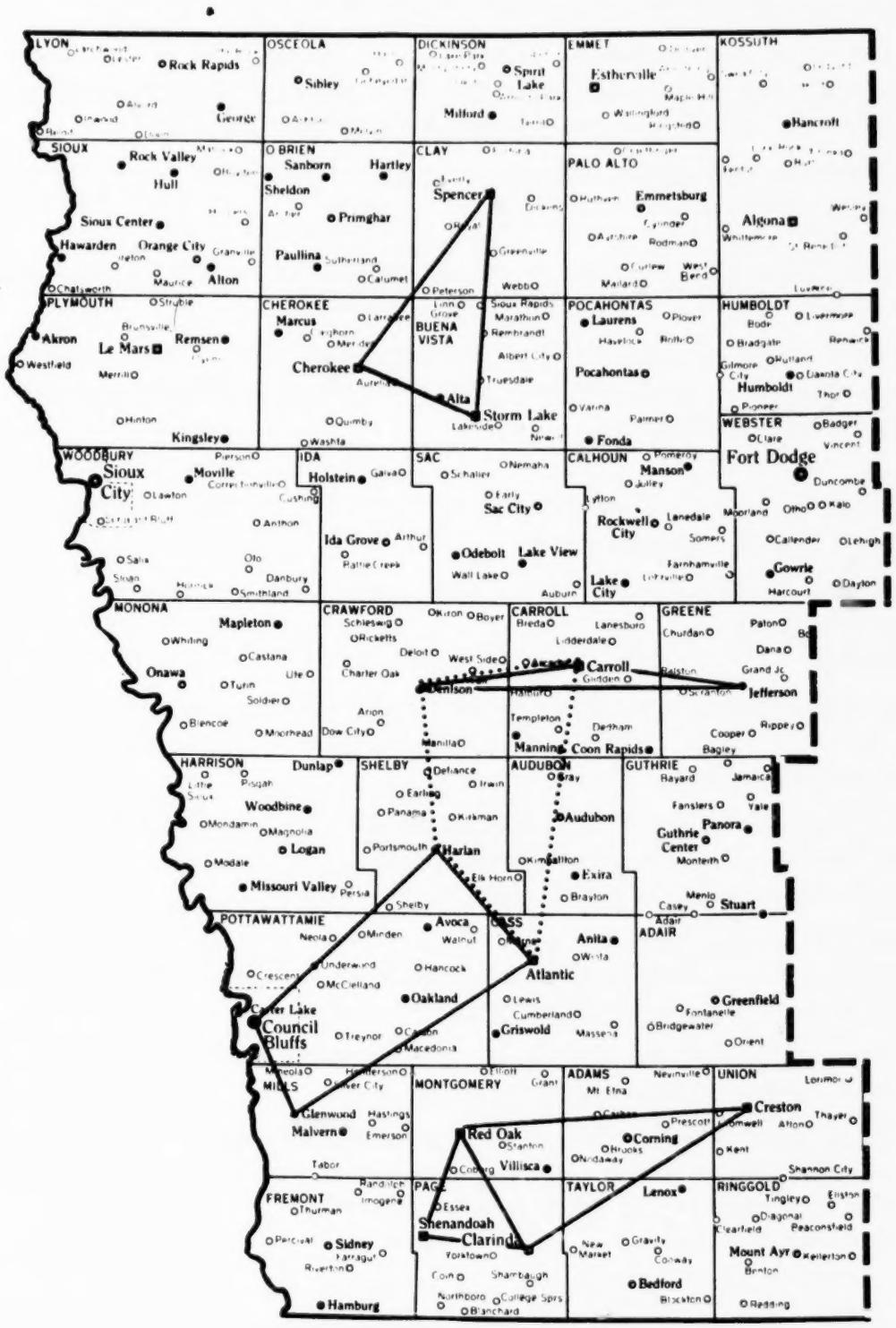
  This consideration is important, since students traveling within the State do so chiefly by automobile and bus.

- **Within these guidelines, the consultants originally proposed five alternative locations; the Board selected a sixth, between two of the original five.**

  The map on the facing page shows the general locations identified and the location chosen by the Board.

  This location, bounded by Atlantic, Carroll, Denison, and Harlan, was then analyzed intensively to select the specific site.

GENERAL LOCATIONS UNDER CONSIDERATION



Recommended by Consultants

Selected by the Board of Regents

Site Selection

- **The final selection of a site involves evaluation of architectural and engineering factors, as well as further evaluation of the community.**

  Architectural and engineering considerations include some of the points previously noted (land use, topography, etc.), as well as site shape and size, utilities, development costs, construction requirements, and zoning.

  Community considerations include population, medical services, transportation, housing, schools, and civic resources.

- **The first step was to evaluate all communities and sites within the proposed location in order to eliminate those that were unsuitable.**

  All communities located within the geographic boundaries of the general location designated by the Board of Regents were requested to sponsor sites of at least 600 acres for the institution.

  Each community sponsoring a site was also asked to submit a "profile," giving data on government, population, various types of community facilities and services, housing, utilities, and taxes.

  Of the 15 communities within the general location, six sponsored specific sites; two communities joined in sponsoring a single site; two others responded more generally.

  The profile information for each of these ten communities was analyzed by a study team before it visited the community for the first time; to many of these communities, subsequent visits also were paid.

- **On the basis of the analysis and team visits, three communities—Atlantic, Harlan, and Carroll, in that order—were selected as offering both general potential and a specific site that could support the proposed institution.**

  Some idea of the support required can be gained from assuming that by its tenth year of operation, the school will have a staff of approximately 1,100 persons; if a family size of 4 is assumed, this means 4,400 persons.

  Community support for this increase will require an additional 550 service families, or about 2,200 persons.

  To these 6,600 persons must be added the 7,150 single students and the 1,250 married student families (at 2.5 persons per family, this equals 3,125 persons) that are postulated by that time; the host community can thus reasonably expect a total population increase of 16,875 within ten years after the institution opens its doors.

  This does not take into consideration any additional industries or activities which the college might well be expected to attract.

Order of Preference

- **While architectural and engineering considerations played a major part in the ranking of these three communities as locations for the new institutions, certain community considerations were also weighed.**

  As the following table shows, Atlantic is the most favorably situated in relation to the college-void area of the State, and would thus offer the least competition with existing public and private institutions having the same role and scope.

LOCATION COMPARISON CHART

Factor	Atlantic	Carroll	Harlan
Distance to geographical center of students in Western Iowa (miles)	54	23	35
Distance to geographical center of students in college-void area of Western Iowa (miles)	10	48	16
Distance to nearest Regents' university (miles)	85	65	91
Distance to nearest private four-year college (miles)	47	26	27
Potential students within 50-mile radius (1973)	10,483	11,866	9,783
Distance to nearest interstate highway (highway miles)	6	44	11

Atlantic and Carroll have more bonding capacity than Harlan for providing the additional civic and educational facilities that would be needed to support the college community.

Atlantic and Harlan are both more favorably located for access to the interstate highway system than Carroll.

- **From the Architects' point of view, Atlantic would be the most desirable site.**

  The proposed site at Atlantic is visually inviting and architecturally interesting; the physical aspects of size, shape, drainage, soil conditions and areas for buildings are superior; and there is excellent integration between the campus and the community.

  While each of the other sites has its own attractions and advantages, the Carroll site would require special foundations and hence be somewhat more expensive to develop.

The Atlantic Site

- **The Atlantic site offers significant opportunities for creating a campus setting of real merit.**

The proposed tract, of almost 700 acres, lies immediately south of the town and would be continuous with it.

The topography is rolling, cut by several moderate ravines, and the site is partially covered by a fine stand of open oak timber.

The general slope is from the south and east down to the flood plain of the Nishnabotna River on the west, and there are two long east-west ridges forming a natural gentle bowl.

The proposal would be to put the physical facilities of the college on these ridges and their slopes, leaving the lower portion of the site, toward the river, for an eventual field house and stadium.

A lake would also be possible, with a minimum of silting and pollution.

A prime advantage of the Atlantic site is that it would be visible as a whole, so that the institution could be planned for maximum architectural harmony and impact.

The Problem of Midwestern

- **A special problem was raised by the proffer, on the part of the City of Denison, of Midwestern College as a site for the new institution.**

Special attention was given by the study team to the possibility of taking over Midwestern College, currently in financial difficulties, as the nucleus of the new institution.

Attractive features of this offer were that Midwestern is already a going concern, and that part of the cost of a new plant might thus be avoided.

After a careful canvass of the situation, the team decided that this action would not be in the best long-term interests of higher education in Iowa; the campus site is too small for a school of the proposed size, with little possibility of expansion, and the present buildings are not entirely adequate.

It was thus concluded that any present economy would be more than offset by future costs as well as limitations on the new institution; and even the immediate savings might well be less than expected.

The Costs

- **The costs of financing the new institution are of two kinds—operating costs and capital costs.**

  Operating costs are the annual costs of running the institution; they include such items as salaries, administration, plant maintenance, and programs.

  Capital costs are the original costs of the land and buildings, and of added buildings as the enrollment and program grow.

  Operating Costs

- **Operating costs are estimated on the basis of the kinds of programs the school will offer and the projected student enrollment.**

  The number of faculty can be derived from the number of students by use of a student-faculty ratio (expected number of students per member of the faculty); planning was based on a ratio of 15 to 1.

- **Projected enrollments for the new school foresee 8,550 students at the end of the twentieth year, and a faculty of 570.**

  The stages in which these enrollments are expected to be reached are as follows:

Year of Operation	Students	Faculty
First	1,250	84
Second	2,300	153
Third	3,375	225
Fourth	4,450	297
Fifth	5,500	367
Tenth	8,400	560
Twentieth	8,550	570

- **The following assumptions have been made about the kinds of programs the new school will offer.**

  First, the school will be a four-year undergraduate liberal arts institution; this means that it will not offer an elaborate graduate program except perhaps in the limited field of advanced degrees for teachers.

  Second, the school will have little departmental or organized research; it will not seek large research contracts.

  Third, it will not offer major organized activities, such as a hospital or a laboratory school.

Fourth, while extension services and public services will eventually become an important part of the school's mission in Western Iowa, they will develop slowly in the early years.

- **In program, it is considered that the school will be more nearly like the University of Northern Iowa and Iowa's private liberal arts colleges than like the other two State universities, and its patterns of expense should be generally similar.**

  On the basis of experience in UNI, in 22 private Iowa colleges, and in numerous public and private colleges throughout the United States, the consultants arrived at the following pattern of expense for the new institution (the classifications of expense are those commonly used in the educational world to describe the various kinds of operating expense):

Expense Classification	Percentage of Total Budget
Administration and General	23%
Instruction and Departmental Research	50
Organized Activities	1
Organized Research	–
Extension and Public Service	5
Library	6
Physical Plant	15

Professional librarians regard 5 per cent as the minimum that should be spent for library purposes; and the new institution will have the task of building its library from the beginning.

- **Once these percentages were established, the problem was to translate them into dollar terms; here, the consultants used the key category of instruction, which is expected to account for half the total budget.**

  In the year ended June 30, 1967, instructional expense at the University of Northern Iowa totaled $5,058,300 for 392 full-time-equivalent faculty.

  Average expense per member of the faculty, therefore, was $12,904, after deduction for operation of the laboratory school.

  When this amount was projected for the new institution on the basis of its expected faculty, dollar amounts for the other items could then be determined.

  It is not necessary to estimate the expense of the so-called "auxiliary enterprises"—dormitories, dining rooms, etc.—since these are usually self-supporting, paid for directly by student fees.

- **The expense distribution pattern shown on the preceding page can be expected to stabilize about the fifth year of operation; the expenses in earlier years will be somewhat modified.**

  Thus no expenditures for organized activities are expected in the first two years, but the library expenditures may be higher.

  Operation of physical plant can also be expected to represent a higher percentage of the total budget at the outset.

  Extension and public service activities will increase each year and should stabilize by the fifth year.

- **In terms of 1967 dollars, expenses could be expected to rise from a little over $2 million in the first year of operation to $9.4 million in the fifth year and $14.7 million in the twentieth.**

  As the table on page 27 shows, the rise in cost would be steepest during the first five years; from the tenth year on, costs (in 1967 dollars) would be relatively constant, since most of the growth in enrollment would have occurred.

  In adjusted dollars, however, assuming a 5 per cent inflation annually and 1973 as the year the new institution opens, the cost would rise from nearly $3 million in the first year of operation, to $15.3 million in the fifth year, and $30 million in the tenth year.

  By the twentieth year, the cost would approach $50 million.

  The cost by the end of the first biennium would be over $6 million in 1967 dollars, or $8.4 million in adjusted dollars.

  During the second biennium, the sums needed would increase to $13.4 million and $21 million, respectively.

- **In addition to the operating costs once the school is opened are the costs of developing the institution.**

  In the four years before the school opens its doors, a President and staff must be appointed to assist in planning the school; the library must be started; and the emerging campus must be serviced and maintained.

  These costs are expected to be as follows:

First year	$200,000
Second year	200,000
Third year	300,000
Fourth year	400,000

- **It is considered that the major impact of the new institution upon existing institutions would be primarily financial.**

  The proposed location of the new school in a "college-void" area minimizes it as a source of competition for students, and competition for faculty would be lessened by its orientation toward teaching rather than research.

  Funds for its construction and for its annual operation, however, would constitute an alternative claim on funds that might otherwise go to the Regents' institutions and the area schools.

ANNUAL OPERATING EXPENSE
FOR PROPOSED WESTERN IOWA INSTITUTION

Expense Category	Amount ($000)	Amount ($000)	Amount ($000)	Amount ($000)	Amount ($000)	Amount ($000)	Amount ($000)
Administrative and General	$ 455	$ 829	$1,278	$1,685	$ 2,162	$ 3,324	$ 3,383
Instruction and Departmental Research (a)	1,084	1,974	2,903	3,832	4,700	7,226	7,355
Organized Activities	–	–	58	77	94	145	147
Extension and Public Service	43	79	174	307	470	723	736
Library	152	276	348	460	564	866	883
Physical Plant	434	790	1,045	1,303	1,410	2,168	2,206
Total in 1967 Dollars	$2,168	$3,948	$5,806	$7,664	$ 9,400	$14,452	$14,710
	$6,116 First Biennium		$13,470 Second Biennium				
Total in Adjusted Dollars (b)	$2,906	$5,556	$8,579	$12,483	$15,311	$30,047	$49,808
	$8,462 First Biennium		$21,062 Second Biennium				

(a) Assumes average cost per member of the faculty of $12,904.

(b) Assumes that costs will rise at rate of 5 per cent annually and that school will open in 1973.

Capital Costs

- **Building costs were projected on the total area required in the school's fifteenth year of operation, since by that time practically the top enrollment would have been reached.**

  The method of projection was to estimate the size of facilities needed on the basis of commonly accepted standards of gross square feet per student for various types of facility.

  On this basis, for 8,500 students, the following needs were projected:

Type of Facility	Gross Square Feet
Academic	585,900
Physical education	156,000
Administration and services	174,100
Auxiliary facilities (union, auditorium)	326,000
Physical plant	136,000
Subtotal	1,560,000
Residential facilities	1,934,000
Total	3,312,000

  A parking area of 1,675,000 square feet by the end of ten years was also provided.

  It was assumed that the entire campus facilities, except for unoccupied areas, would be heated and air conditioned from a central power plant.

- **It was assumed that construction would be spread in increments over the first ten years.**

  Since preliminary projections indicate that the greatest portion of student enrollment will have been achieved in the tenth year of operation, the schedule of construction provides for completing all construction for the 20-year level by the end of the first decade.

  Classrooms, laboratories and faculty offices should be constructed in four approximately equal increments.

  The resource center, which includes the library, can most economically be constructed in increments of one-half the total, one-quarter, and one-quarter.

  The gymnasium should be built in two equal increments; the pool would be constructed at one time, when enrollment warrants.

The administration facility and the student union should each be constructed in two phases; the auditorium, like the pool, should be built as a unit, preferably as soon as the student body reaches 50 per cent of its projected 20-year enrollment.

Housing can be phased to fit the growth in enrollment, with housing for single students added yearly, and for married students in four installments.

- **Total costs were then figured on an estimated cost per square foot for each type of building, and an escalation factor (cost increase index, pictured on the following page) applied to arrive at costs in terms of the years in which they would be incurred.**

  The quality of construction was assumed to be similar to that in the present Regents' institutions.

  Costs per square foot, as of October 1968, varied from a high of $47 for a swimming pool to a low of $21 for a police-fire facility.

  Because of subsoil conditions at the Carroll site, 50 cents per square foot would have to be added for special foundations.

  These cost figures should be regarded as guidelines only; they could be changed when a more detailed architectural plan is worked out, if the pace of escalation should change, or as a result of technological changes in educational methods, in environmental and living patterns, and in planning and construction techniques.

  They are, however, as accurate as possible within the present limits, and offer an order-of-magnitude idea of what the new institution might be expected to cost.

- **As the table on page 31 shows, total costs for construction, including equipment and furnishings, for the new institution are projected to be $192 million through 1983.**

  As the column on cumulative cost shows, over half the total would have been incurred by the time the school ends its fifth year of operation.

o **Of this total cost, the amount required to be funded by the General Assembly would be approximately $71 million.**

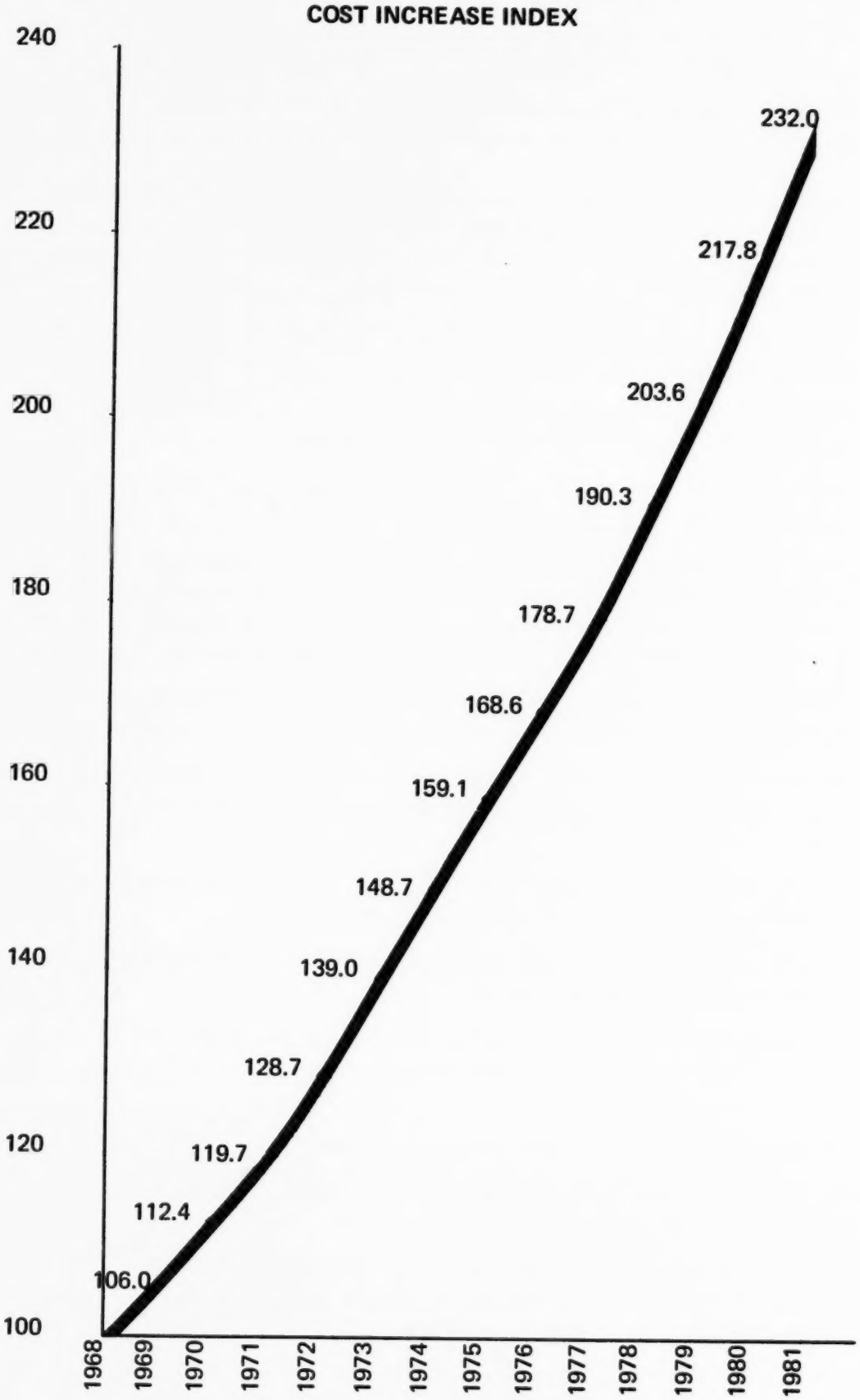
  The remaining $120 million would be incurred for the student union and for student housing, which under present practice can be financed through bond issues.

  Generally speaking, dormitories should be self-amortizing.

o **In addition to building costs would be the costs of acquiring land and of developing off-site utilities.**

  At Atlantic, the cost of the land would be around $500,000, in the opinion of two independent appraisers; and off-site utilities would total $2,313,000 over a 10-year period.

  There would also be certain preliminary legal, etc., costs of perhaps $150,000.


COST INCREASE INDEX
240
220
200
180
160
140
120
100
106.0
112.4
119.7
128.7
139.0
148.7
159.1
168.6
178.7
190.3
203.6
217.8
232.0
1968
1969
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979
1980
1981

PROJECTED DEVELOPMENT EXPENDITURES BASED UPON 1973 OCCUPANCY AT RECOMMENDED SITE IN ATLANTIC, IOWA
(In Thousands of Dollars)

Time Of Construction	Year Funded	Year Occupied	Development Cost (In 1968 Dollars)	Escalation Factor (a)	Projected Cost (b)	Fees (c)	Total Cost	Cumulative Cost
Initial construction	1971	1973	$ 25,646	119.7	$ 30,708	$ 1,690	$ 32,398	–
Year 1	1972	1974	5,439	128.7	6,980	384	7,364	$ 39,762
Year 2	1973	1975	8,055	139.0	11,210	616	11,826	51,583
Year 3	1974	1976	10,746	148.7	15,980	875	16,855	68,443
Year 4	1975	1977	12,461	159.1	19,850	1,091	20,941	89,384
Year 5	1976	1978	17,671	168.6	29,800	1,639	31,439	120,823
Year 6	1977	1979	9,032	178.7	16,140	887	17,027	137,850
Year 7	1978	1980	5,864	190.3	11,190	615	11,805	149,655
Year 8	1979	1981	4,884	203.6	9,950	547	10,497	160,152
Year 9	1980	1982	3,465	217.8	7,550	415	7,965	168,117
Year 10	1981	1983	9,752	232.0	22,640	1,246	23,886	192,003
Total Expenditures			$113,015		$181,998	$10,005	$192,003	

(a) Based upon projection of increases in construction costs.

(b) Development cost in 1968 dollars times Escalation Factor.

(c) 5.5 per cent of projected cost.

MEMBERS OF THE PROFESSIONAL ADVISORY COMMITTEE FOR THE STUDY OF THE NEW INSTITUTION OF HIGHER EDUCATION IN WESTERN IOWA

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Alvin H. Scaff, Associate Dean of the Graduate College, University of Iowa

Dean Zenor, Director of the Institute of Public Affairs, University of Iowa

TEXT OF THE REGENTS' CHARGE TO THE PROFESSIONAL ADVISORY COMMITTEE

The primary purpose of the study is to determine the answers to the following questions regarding the new institution:

1. What kind of institution should be established?
2. When should it be opened?
3. Where should it be located?
4. How much will it cost?

The Professional Advisory Committee has three basic functions. Those functions are to insure that the study is comprehensive, factual, and objective, to act as a resource group in furnishing leads to the consultants concerning sources of data and information; and to insure that the study is related to higher educational needs in Iowa. The first task of the Committee will be to review procedures and methodology proposed by the consultants for carrying out the study. When a particular phase of the study has been completed by the consultants, all pertinent information, findings, conclusions and tentative recommendations shall be presented to the Committee for its review before presentation to the Board of Regents for its consideration. The purpose of the review by the Committee will be to determine that the data and findings are accurate and complete. The Committee might raise, at this point, questions that were overlooked by the consultants. The purpose of the Committee is not to "screen" the recommendations or to insulate the Board from its consultants. Rather, its purpose is to assure the Board that the basic study leading to the recommendation is sound. The wisdom or acceptibility of the recommendations of the consultants would be left to the Board to determine.